

[A-4]

SARDAR PATEL UNIVERSITY
M.Sc.IT Examination, 9th Semester
Wednesday, 27th October, 2016.
Time: 10:00 P.M to 12:00 P.M
Subject Code: PS09EIT02
Subject: Parallel Computing

Total Marks: 70

Q.1 Multiple Choice Questions

[08]

- [1] The _____ of a device is the number of result it produce per unit time.
A. Pipeline. B. Segments. C. Throughput. D. Speedup.
- [2] The number of task that can be executed in parallel is
A. Concurrency C. Degree
B. Degree of Concurrency D. Parallel Programming
- [3] Flits means
A. Flow Control System C. Flow Control Digit
B. Flow Cut digit D. Flow Control Device
- [4] _____ are determine by taskdependency and task interaction graph.
A. Processing C. Both A and B
B. Mapping D. None of Above
- [5] _____ Task are generated as we perform computation.
A. Static C. Simple
B. Dynamic D. Both A and B
- [6] The Maximum distance between two processors in the computer system is.
A. Bandwidth. C. Bisectionwidth.
B. diameter. D. Network size.
- [7] The dual of one to all broadcast is
A. All-all Reduction C. All-one reduction
B. One-all reduction D. One-one reduction
- [8] Single node send a unique meseage of size m to every other node.
A. Gather C. One-all communication
B. Scatter D. All-all Broadcast

Q.2 Short Questions(Attempt Any Seven)

[14]

1. What is task dependency graph?
2. What is critical path length?
3. List decomposition technique.
4. List down mapping techniques.
5. What is Parallel Processing.
6. Define Super computer and Degree of Parallelism.
7. Draw the Diagram for Processor Organization.
8. What is Startup time and Per-hop time.
9. What do you mean by all-all broadcast.

- Q.3 a) Explain Parallelism in Uniprocessor system. [06]
b) Explain Flynn's classification in detail. [06]

OR

- Q.3 b) List all Topology. Explain any three in detail. [06]

- Q.4 a) Explain Superscalar Execution. [06]
b) Explain Store and Forward Routing. [06]

OR

- Q.4 b) Explain architecture of Ideal Parallel Computer (PRAM). [06]

OR

- Q.5 a) Explain characteristics of graph. [06]
b) List and Explain Dynamic mapping scheme. [06]

OR

- b) List and Explain static Mapping Scheme. [06]

- Q.6 a) Explain Prefix Sum Operation. [06]
b) Explain one to all broadcast and all to one reduction in detail. [06]

OR

- Q.6 b) Explain all to all broadcast and reduction in detail. [06]

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